ABSTRACT

A data transmission system employs a method of aligning transmission lanes with reception lanes in a multiplexing arrangement. A plurality of control symbols and lane identifiers are transmitted on each of the transmission lanes. The transmission lanes are divided into groups for time–division multiplexing. Within the groups, the transmission lanes are time–division multiplexed and then wave–division multiplexed onto a data link. Upon reception, wave–division and time–division demultiplexing is conducted to extract groups of reception lanes corresponding to the groups of transmission lanes. One of the reception lanes in each group of reception lanes is monitored for receipt of a control symbol followed by a lane identifier. Upon receipt, the lane assignment of the reception lanes is rotated within the particular group if the received lane identifier does not match the identity of the reception lane being monitored.